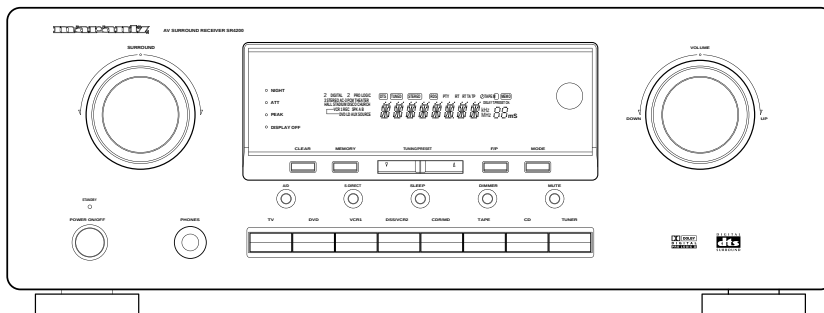


Service Manual

SR4200/N1B,/N1G,/F1N,/K1G,/L1G,/U1B

AV Surround Receiver



DIGITAL
dts
SURROUND



DOLBY
D I G I T A L
P R O L O G I C II

TABLE OF CONTENTS

1.	TECHNICAL SPECIFICATIONS	1
2.	REMARK	2
3.	BLOCK DIAGRAM	3
4.	WIRING DIAGRAM	5
5.	SCHEMATIC DIAGRAM AND PARTS LOCATION (Parts side)	7
6.	MICROPROCESSOR AND IC DATA	21
7.	MEASUREMENTS AND ADJUSTMENTS	31
8.	EXPLODED VIEW AND PARTS LIST	34
9.	ELECTRICAL PARTS LIST	37

Please use this service manual with referring to the user guide (D.F.U) without fail.

修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行って下さい。

marantz®

SR4200

319W855010 AO
3120 785 22690
First Issue:2001.08

SR4200

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

USA

MARANTZ AMERICA, INC.
1100 MAPLEWOOD DRIVE
ITASCA, IL. 60143
USA
PHONE : 630 - 741 - 0300
FAX : 630 - 741 - 0301

EUROPE / TRADING

MARANTZ EUROPE B.V.
P.O.BOX 80002, BUILDING SFF2
5600 JB EINDHOVEN
THE NETHERLANDS
PHONE : +31 - 40 - 2732241
FAX : +31 - 40 - 2735578

BRAZIL

PHILIPS DA AMAZONIA IND. ELET. ITDA
CENTRO DE INFORMACOES AO
CEP 04698-970
SAO PAULO, SP, BRAZIL
PHONE : 0800 - 123123(Discagem Direta Gratuita)
FAX : +55 11 534. 8988

PROFESSIONAL AMERICAS

SUPERSCOPE TECHNOLOGIES, INC.
MARANTZ PROFESSIONAL PRODUCTS
2640 WHITE OAK CIRCLE, SUITE A
AURORA, ILLINOIS 60504 USA
PHONE : 630 - 820 - 4800
FAX : 630 - 820 - 8103

PROFESSIONAL AUSTRALIA

TECHNICAL AUDIO GROUP PTY, LTD
558 DARLING STREET,
BALMAIN, NSW 2041,
AUSTRALIA
PHONE : 61 - 2 - 9810 - 5300
FAX : 61 - 2 - 9810 - 5355

CANADA

LENBROOK INDUSTRIES LIMITED
633 GRANITE COURT,
PICKERING, ONTARIO L1W 3K1
CANADA
PHONE : 905 - 831 - 6333
FAX : 905 - 831 - 6936

AUSTRALIA

QualiFI Pty Ltd,
24 LIONEL ROAD,
MT. WAVERLEY VIC 3149
AUSTRALIA
PHONE : +61 - (0)3 - 9543 - 1522
FAX : +61 - (0)3 - 9543 - 3677

THAILAND

MRZ STANDARD CO.,LTD
746 - 754 MAHACHAI ROAD.,
WANGBURAPAPIROM, PHRANAKORN,
BANGKOK, 10200 THAILAND
PHONE : +66 - 2 - 222 9181
FAX : +66 - 2 - 224 6795

SINGAPORE

WO KEE HONG DISTRIBUTION PTE LTD
130 JOO SENG ROAD
#03-02 OLIVINE BUILDING
SINGAPORE 368357
PHONE : +65 858 5535 / +65 381 8621
FAX : +65 858 6078

NEW ZEALAND

WILDASH AUDIO SYSTEMS NZ
14 MALVERN ROAD MT ALBERT
AUCKLAND NEW ZEALAND
PHONE : +64 - 9 - 8451958
FAX : +64 - 9 - 8463554

TAIWAN

PAI- YUING CO., LTD.
6 TH FL NO, 148 SUNG KIANG ROAD,
TAIPEI, 10429, TAIWAN R.O.C.
PHONE : +886 - 2 - 25221304
FAX : +886 - 2 - 25630415

MALAYSIA

WO KEE HONG ELECTRONICS SDN. BHD.
SUITE 8.1, LEVEL 8, MENARA GENESIS,
NO. 33, JALAN SULTAN ISMAIL,
50250 KUALA LUMPUR, MALAYSIA
PHONE : +60 3 - 2457677
FAX : +60 3 - 2458180

JAPAN *Technical*

MARANTZ JAPAN, INC.
35- 1, 7- CHOME, SAGAMIONO
SAGAMIHARA - SHI, KANAGAWA
JAPAN 228-8505
PHONE : +81 42 748 1013
FAX : +81 42 741 9190

日本マランツ株式会社

本 社 〒228-8505
神奈川県相模原市相模大野7-35-1
営業本部 〒150-0022
東京都渋谷区恵比寿南1-11-9

KOREA

MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical
Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

FM TUNER SECTION

Frequency Range	76.0 - 90.0 MHz (F) 87.5 - 108.0 MHz (K, /L, /N, /U)
Usable Sensitivity	IHF 1.8 μ V/16.4 dB
Signal to Noise Ratio	Mono/Stereo 70/65 dB
Distortion	Mono/Stereo 0.2/0.3 %
Stereo Separation	1 kHz 45 dB
Alternate Channel Selectivity	$\pm$ 300 kHz 60 dB
Image Rejection	82 MHz 70 dB (F) 98 MHz 70 dB (K, /L, /N, /U)
Tuner Output Level	1 kHz, $\pm$ 40 kHz Dev 600 mV

AM TUNER SECTION

Frequency Range	531 - 1602 kHz (F, /K, /L) LW: 152 - 282 kHz, MW: 531 - 1602 kHz (N) 520 - 1710 kHz (U)
Signal to Noise Ratio	50 dB
Usable Sensitivity	Loop 400 μ V/m
Distortion	400 Hz, 30 % Mod. 0.5 %
Selectivity	$\pm$ 18 kHz 60 dB

AUDIO SECTION

Continuous Power Output (8 ohms / 20 Hz - 20 kHz)	
Front	70W
Center	70W
Surround	70W
THD Front (20 Hz - 20 kHz)	8 ohms 0.09 %
Input Sensitivity/Impedance	
Linear	316 mV/ 47 Kohms
Signal to Noise Ratio	
Linear	99 dB

VIDEO

Input Level/Impedance	1 Vp-p/ 75 ohms
Output Level/Impedance	1 Vp-p/ 75 ohms

GENERAL

Power Requirement	AC 100 V 50/60 Hz (F) AC 220 V 50 Hz (K) AC 110 V 60 Hz (L) AC 230 V 50 Hz (N) AC 120 V 60 Hz (U)
Power Consumption	170W (F) 280W (K, /N) 320W (L) 2.7A (U)
Dimension (MAX)	
Width	17-3/8 inches (440 mm)
Height	6-1/2 inches (164 mm)
Depth	14-3/8 inches (365 mm)
Weight	21.4 lbs (9.7 Kg)

ACCESSORIES

Remote Control Unit RC5200SR	1
AAA-size batteries	2
FM Lead Type Antenna (N, /K, /L)	1
FM Feader Antenna (U, /F)	1
FM Antenna Converter (U, /F)	1
AM Loop Antenna	1
Warranty Card (U, /F)	1
Registration Card (N)	1
User Guide	1
AC Power Cord (N)	1
Post Card (F)	1

Specifications subject to change without prior notice.

2. REMARK

The relation between the selected surround mode and the input signal

The surround mode is selected with the surround mode buttons of the SR4200 or the remote control unit. However, the sound from the speakers depend upon the relationship between the selected surround mode and the input signal. They are as follows;

SURROUND MODE	INPUT SIGNAL	OUTPUT				FLUORESCENT INDICATOR	
		L/R	LS/RS	C	SW	FORMAT STATUS & SURROUND MODE	TEMPORARY DISPLAY STATUS
AUTO	DOLBY DIGITAL(5.1CH)	O	O	O	O	[DOLBY DIGITAL] DIGITAL, AUTO	>AUTO>
	DOLBY DIGITAL(2CH)	O	—	—	O	[DOLBY DIGITAL] DIGITAL, AUTO	>AUTO>
	DOLBY DIGITAL(2CH:Lt/Rt)	O	O	O	O	[DOLBY DIGITAL] DIGITAL, MOVIE, AUTO	>AUTO>
	96KHZ PCM	O	—	—	—	PCM, STEREO, AUTO	>AUTO>
	PCM(AUDIO)	O	—	—	O	PCM, STEREO, AUTO	>AUTO>
	ANALOG	O	—	—	O	STEREO, AUTO	>AUTO>
	DTS(5.1CH)	O	O	O	O	dto, AUTO	>AUTO>
STEREO	DOLBY DIGITAL(5.1CH)	O	—	—	O	[DOLBY DIGITAL] DIGITAL, STEREO	>STEREO>
	DOLBY DIGITAL(2CH)	O	—	—	O	[DOLBY DIGITAL] DIGITAL, STEREO	>STEREO>
	DOLBY DIGITAL(2CH:Lt/Rt)	O	—	—	O	[DOLBY DIGITAL] DIGITAL, STEREO	>STEREO>
	96KHZ PCM	O	—	—	—	PCM, STEREO	>STEREO>
	PCM(AUDIO)	O	—	—	O	PCM, STEREO	>STEREO>
	ANALOG	O	—	—	O	STEREO	>STEREO>
	DTS(5.1CH)	O	—	—	O	dto, STEREO	>STEREO>
[DOLBY] MOVIE	DOLBY DIGITAL(5.1CH)	O	O	O	O	[DOLBY] DIGITAL	>DOLBY D>
	DOLBY DIGITAL(2CH)	O	O	O	O	[DOLBY] DIGITAL, MOVIE	>DOLBY PLII>
	DOLBY DIGITAL(2CH:Lt/Rt)	O	O	O	O	[DOLBY] DIGITAL, MOVIE	>DOLBY PLII>
	96KHZ PCM	—	—	—	—	(PCM), [DOLBY], MOVIE	>DOLBY PLII>
	PCM(AUDIO)	O	O	O	O	PCM, [DOLBY], MOVIE	>DOLBY PLII>
	ANALOG	O	O	O	O	[DOLBY], MOVIE	>DOLBY PLII>
	DTS(5.1CH)	—	—	—	—	(dto), [DOLBY], MOVIE	>DOLBY PLII>
[DOLBY] MUSIC	DOLBY DIGITAL(5.1CH)	O	O	O	O	[DOLBY] DIGITAL	>DOLBY D>
	DOLBY DIGITAL(2CH)	O	O	O	O	[DOLBY] DIGITAL, MUSIC	>DOLBY PLII>
	DOLBY DIGITAL(2CH:Lt/Rt)	O	O	O	O	[DOLBY] DIGITAL, MUSIC	>DOLBY PLII>
	96KHZ PCM	—	—	—	—	(PCM), [DOLBY], MUSIC	>DOLBY PLII>
	PCM(AUDIO)	O	O	O	O	PCM, [DOLBY], MUSIC	>DOLBY PLII>
	ANALOG	O	O	O	O	[DOLBY], MUSIC	>DOLBY PLII>
	DTS(5.1CH)	—	—	—	—	(dto), [DOLBY], MUSIC	>DOLBY PLII>
[DOLBY] PROLOGIC	DOLBY DIGITAL(5.1CH)	O	O	O	O	[DOLBY] DIGITAL	>DOLBY D>
	DOLBY DIGITAL(2CH)	O	O	O	O	[DOLBY] DIGITAL, [DOLBY] PROLOGIC	>DOLBY PL>
	DOLBY DIGITAL(2CH:Lt/Rt)	O	O	O	O	[DOLBY] DIGITAL, [DOLBY] PROLOGIC	>DOLBY PL>
	96KHZ PCM	—	—	—	—	(PCM), [DOLBY] PROLOGIC	>DOLBY PL>
	PCM(AUDIO)	O	O	O	O	PCM, [DOLBY] PROLOGIC	>DOLBY PL>
	ANALOG	O	O	O	O	[DOLBY] PROLOGIC	>DOLBY PL>
	DTS(5.1CH)	—	—	—	—	(dto), [DOLBY] PROLOGIC	>DOLBY PL>
DTS	DOLBY DIGITAL(5.1CH)	—	—	—	—	([DOLBY]), dto	>DTS>
	DOLBY DIGITAL(2CH)	—	—	—	—	([DOLBY]), dto	>DTS>
	DOLBY DIGITAL(2CH:Lt/Rt)	—	—	—	—	([DOLBY]), dto	>DTS>
	96KHZ PCM	—	—	—	—	(PCM), dto	>DTS>
	PCM(AUDIO)	—	—	—	—	(PCM), dto	>DTS>
	DTS(5.1CH)	O	O	O	O	dto	>DTS>
MOVIE HALL MATRIX GAME	DOLBY DIGITAL(5.1CH)	—	—	—	—	([DOLBY]), DSP, MOVIE/ HALL/ MATRIX/ GAME	>MOVIE/ HALL/ MATRIX/ GAME>
	DOLBY DIGITAL(2CH)	—	—	—	—	([DOLBY]), DSP, MOVIE/ HALL/ MATRIX/ GAME	>MOVIE/ HALL/ MATRIX/ GAME>
	DOLBY DIGITAL(2CH:Lt/Rt)	—	—	—	—	([DOLBY]), DSP, MOVIE/ HALL/ MATRIX/ GAME	>MOVIE/ HALL/ MATRIX/ GAME>
	96KHZ PCM	—	—	—	—	(PCM), DSP, MOVIE/ HALL/ MATRIX/ GAME	>MOVIE/ HALL/ MATRIX/ GAME>
	PCM(AUDIO)	O	O	O	O	PCM, DSP, MOVIE/ HALL/ MATRIX/ GAME	>MOVIE/ HALL/ MATRIX/ GAME>
	ANALOG	O	O	O	O	DSP, MOVIE/ HALL/ MATRIX/ GAME	>MOVIE/ HALL/ MATRIX/ GAME>
VIRTUAL	DOLBY DIGITAL(5.1CH)	—	—	—	—	([DOLBY]), DSP, VIRTUAL	>VIRTUAL>
	DOLBY DIGITAL(2CH)	—	—	—	—	([DOLBY]), DSP, VIRTUAL	>VIRTUAL>
	DOLBY DIGITAL(2CH:Lt/Rt)	—	—	—	—	([DOLBY]), DSP, VIRTUAL	>VIRTUAL>
	96KHZ PCM	—	—	—	—	(PCM), DSP, VIRTUAL	>VIRTUAL>
	PCM(AUDIO)	O	—	—	O	PCM, DSP, VIRTUAL	>VIRTUAL>
	ANALOG	O	—	—	O	DSP, VIRTUAL	>VIRTUAL>
5-STEREO	DOLBY DIGITAL(5.1CH)	O	O	O	O	[DOLBY]	>5-STEREO>
	DOLBY DIGITAL(2CH)	O	O	O	O	[DOLBY]	>5-STEREO>
	DOLBY DIGITAL(2CH:Lt/Rt)	O	O	O	O	[DOLBY]	>5-STEREO>
	96KHZ PCM	—	—	—	—	(PCM)	>5-STEREO>
	PCM(AUDIO)	O	O	O	O	PCM	>5-STEREO>
	ANALOG	O	O	O	O		>5-STEREO>
5-STEREO	DOLBY DIGITAL(5.1CH)	O	O	O	O	dto	>5-STEREO>
	DOLBY DIGITAL(2CH)	O	O	O	O		>5-STEREO>
	DOLBY DIGITAL(2CH:Lt/Rt)	O	O	O	O		>5-STEREO>
	96KHZ PCM	—	—	—	—	(PCM)	>5-STEREO>
	PCM(AUDIO)	O	O	O	O	PCM	>5-STEREO>
	ANALOG	O	O	O	O		>5-STEREO>
5-STEREO	DOLBY DIGITAL(5.1CH)	O	O	O	O	dto	>5-STEREO>
	DOLBY DIGITAL(2CH)	O	O	O	O		>5-STEREO>
	DOLBY DIGITAL(2CH:Lt/Rt)	O	O	O	O		>5-STEREO>
	96KHZ PCM	—	—	—	—	(PCM)	>5-STEREO>
	PCM(AUDIO)	O	O	O	O	PCM	>5-STEREO>
	ANALOG	O	O	O	O		>5-STEREO>

Note:

- Dolby Digital (2 ch: Lt/Rt): signal with Dolby Surround flag. Speakers are full set.
- When [DOLBY], dto or PCM is blinking, the selected surround mode is unavailable for input signal. Select the other appropriate surround mode to playback.
- No sound outputs from the surround speaker, center speaker and subwoofer if the DVD disc has no surround data.

L/R : Front speaker

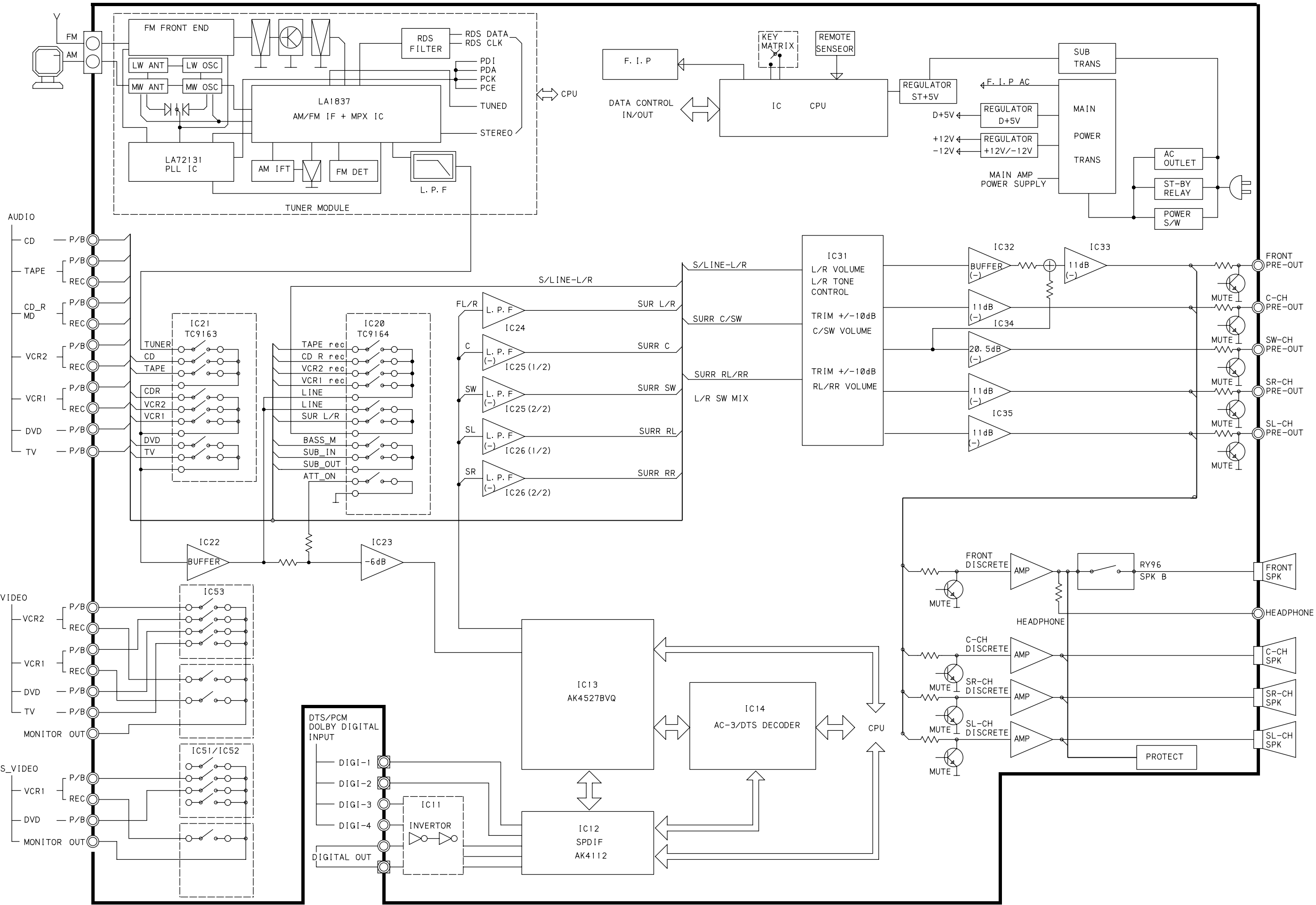
LS/RS : Surround speaker

C : Center speaker

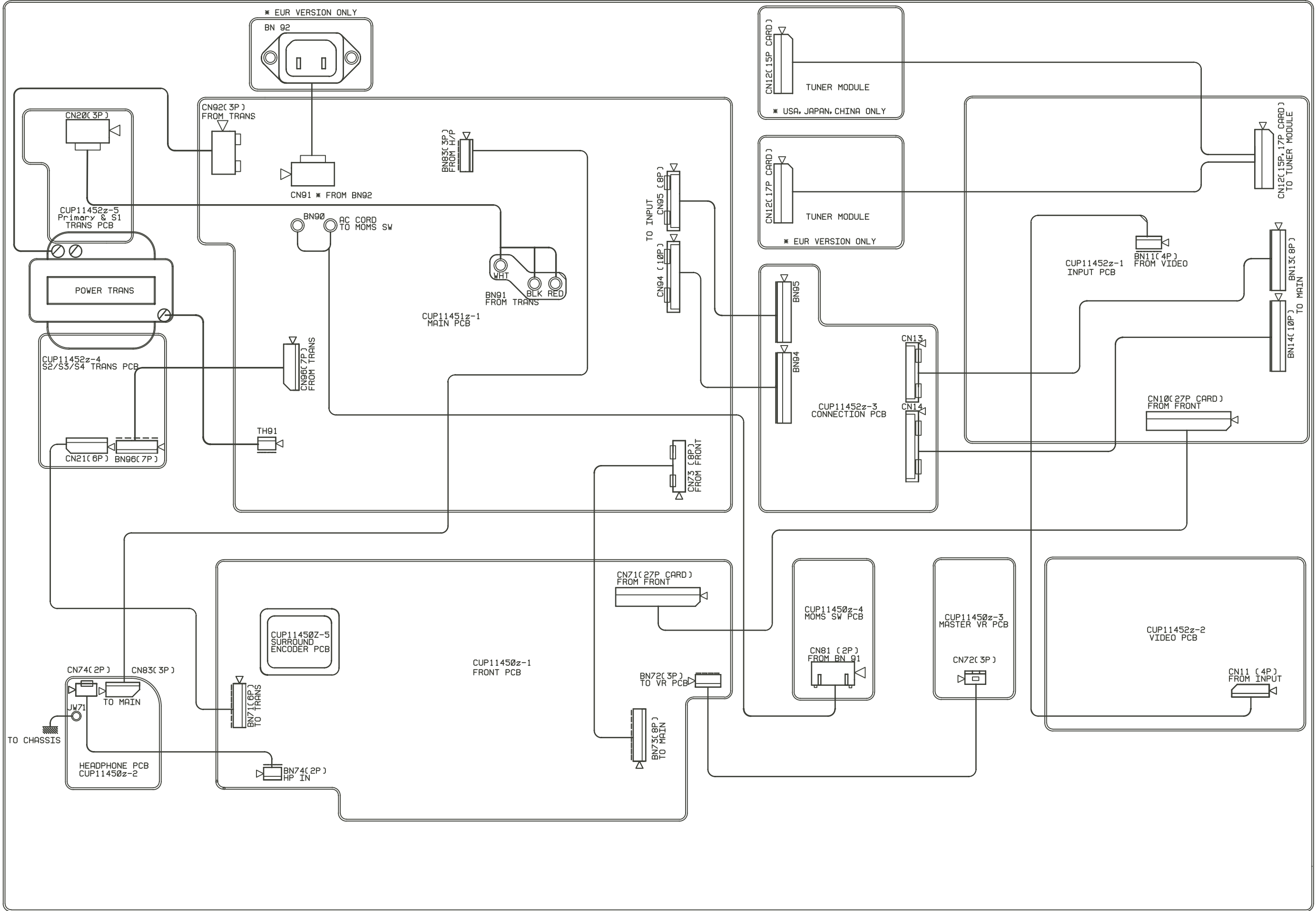
SW : Sub woofer speaker

() : The indicator blinks

3. BLOCK DIAGRAM

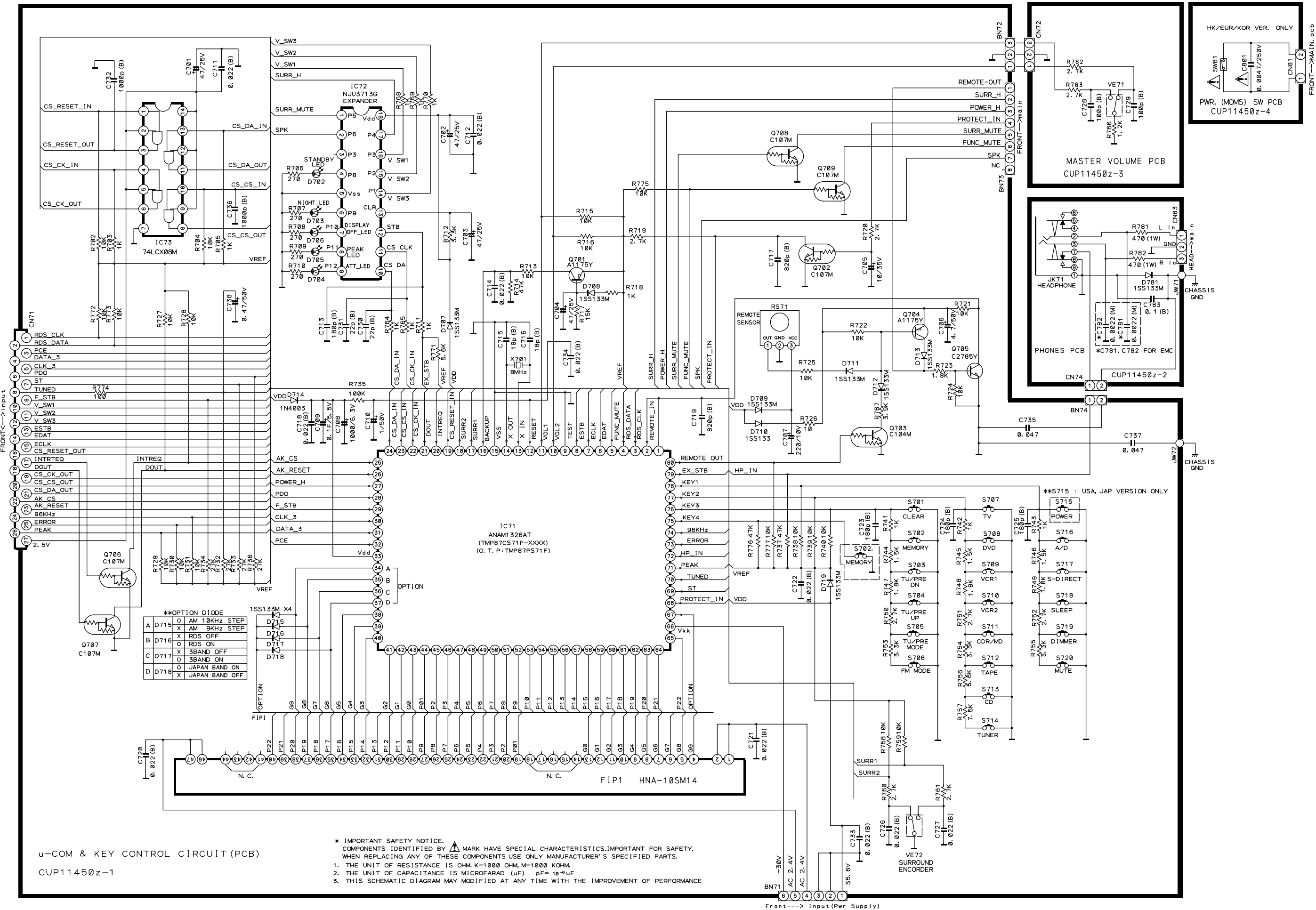


4. WIRING DIAGRAM

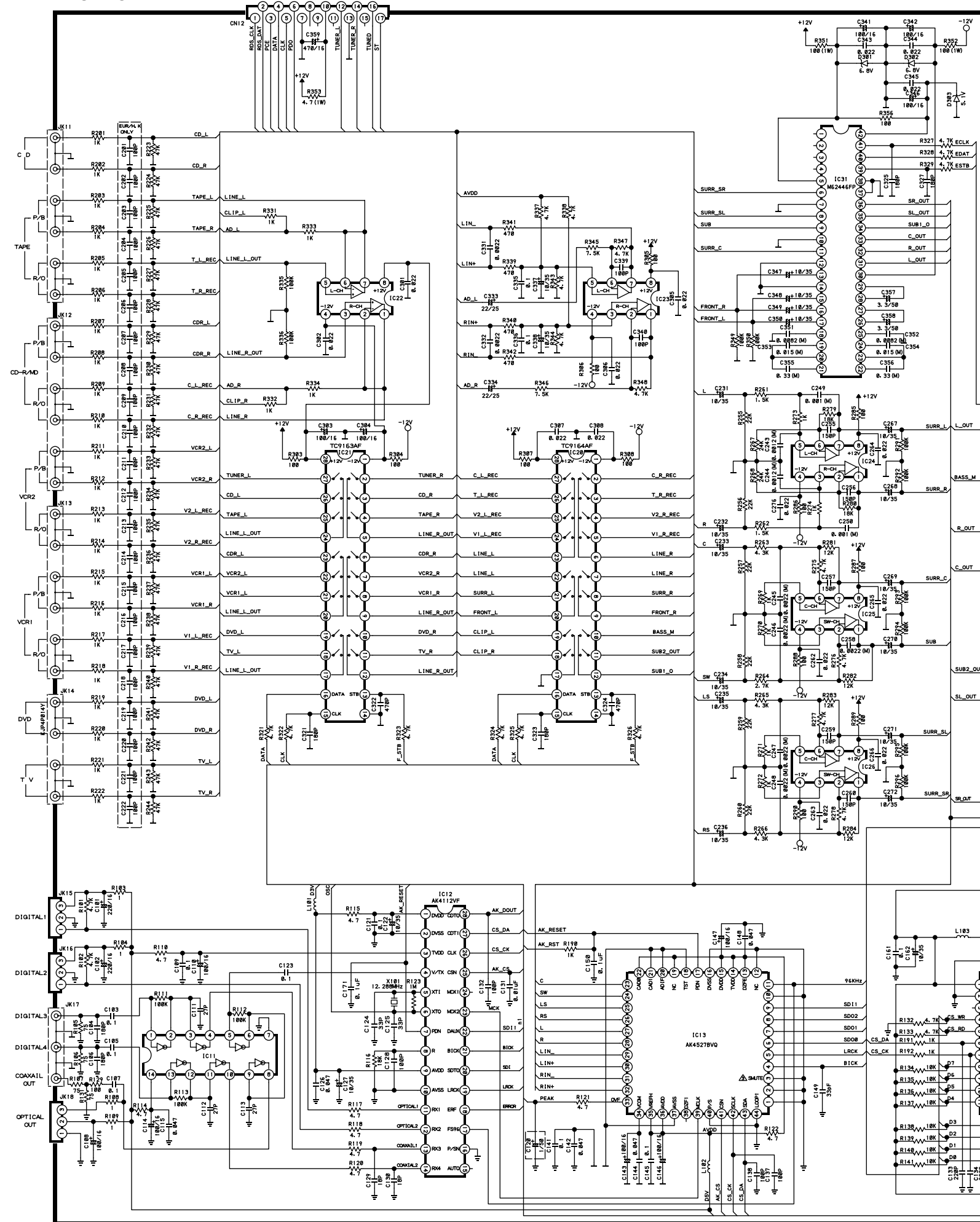


5. SCHEMATIC DIAGRAM AND PARTS LOCATIONS (Parts Side)

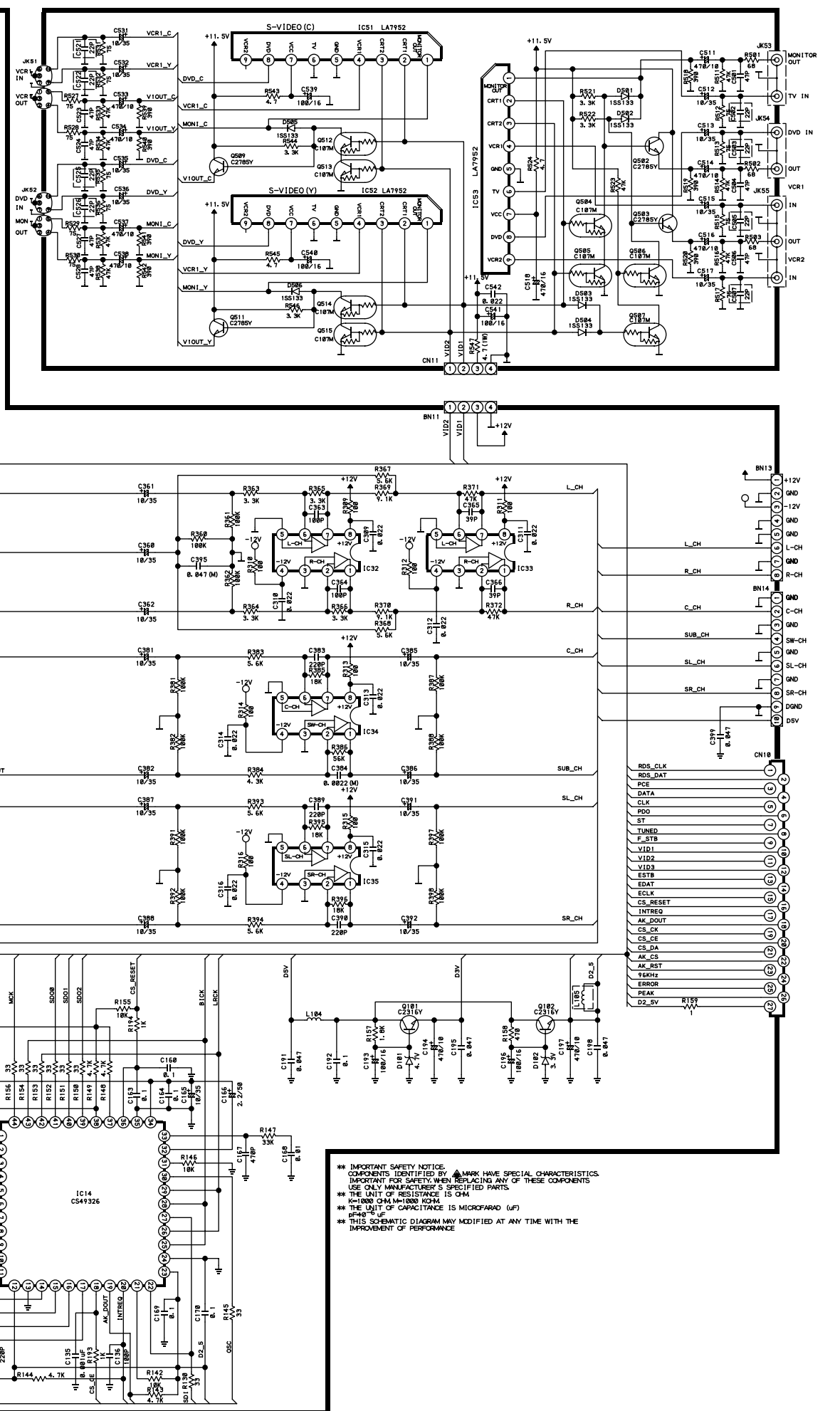
FRONT PCB



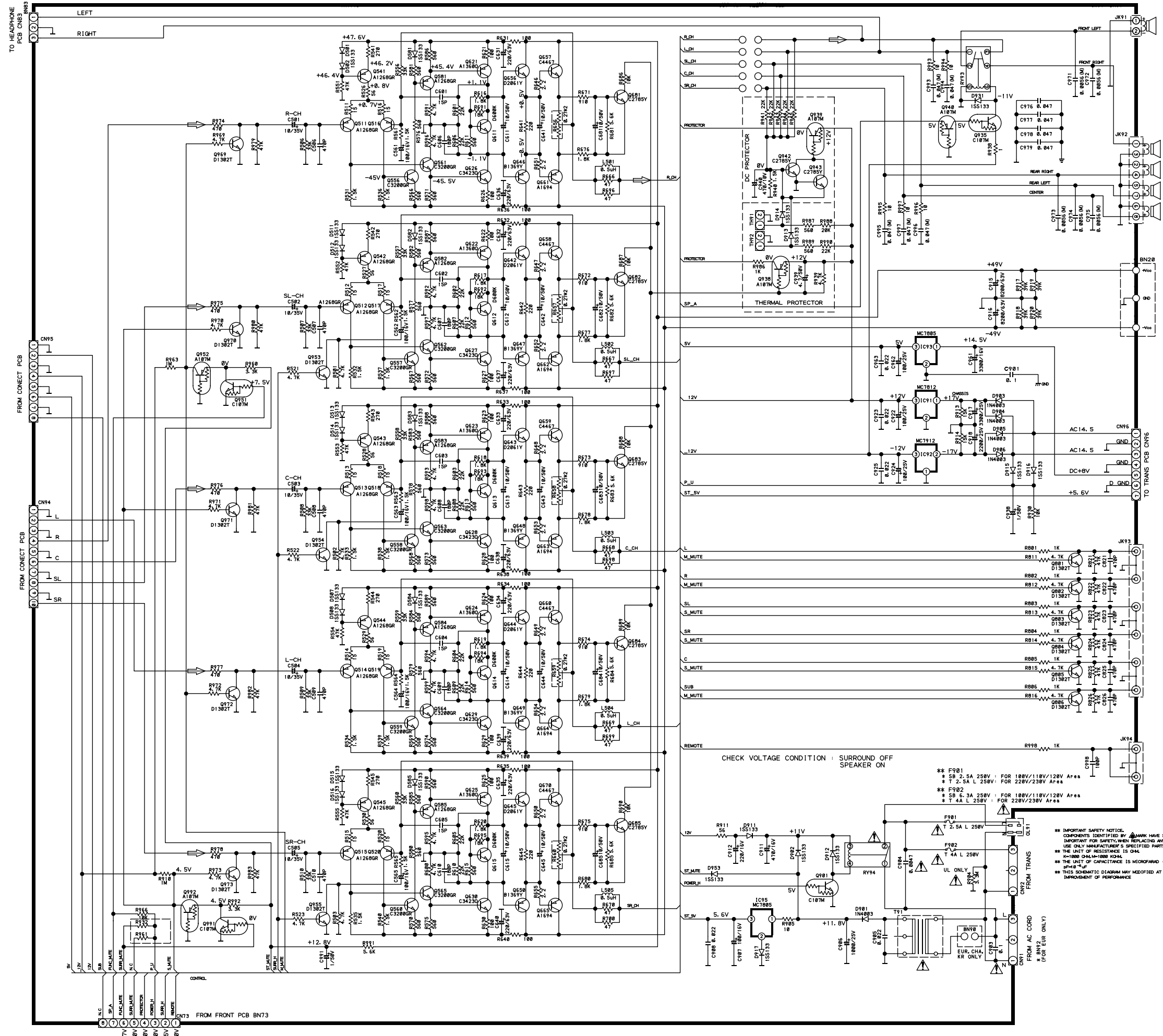
INPUT PCB



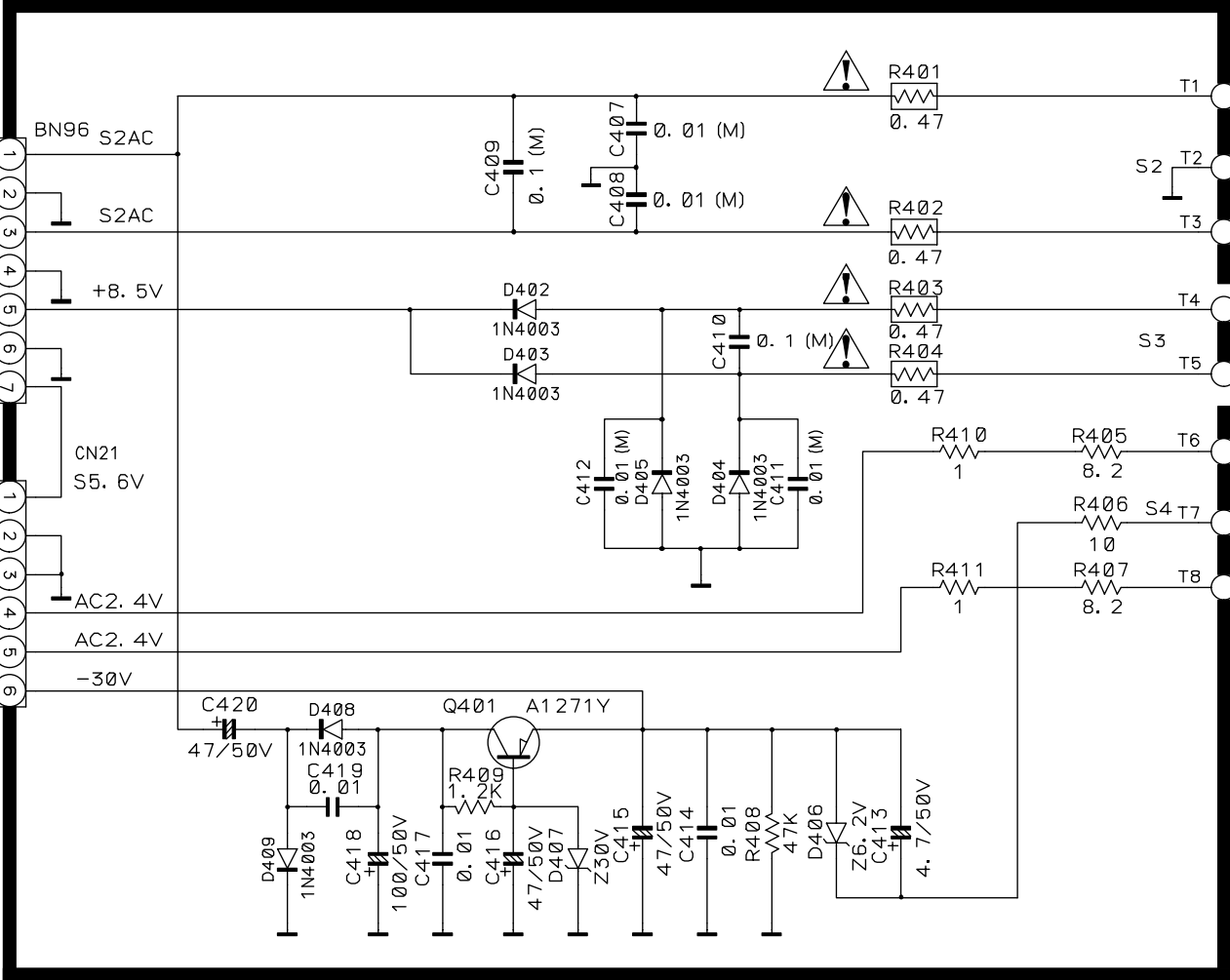
VIDEO PCB



MAIN PCB

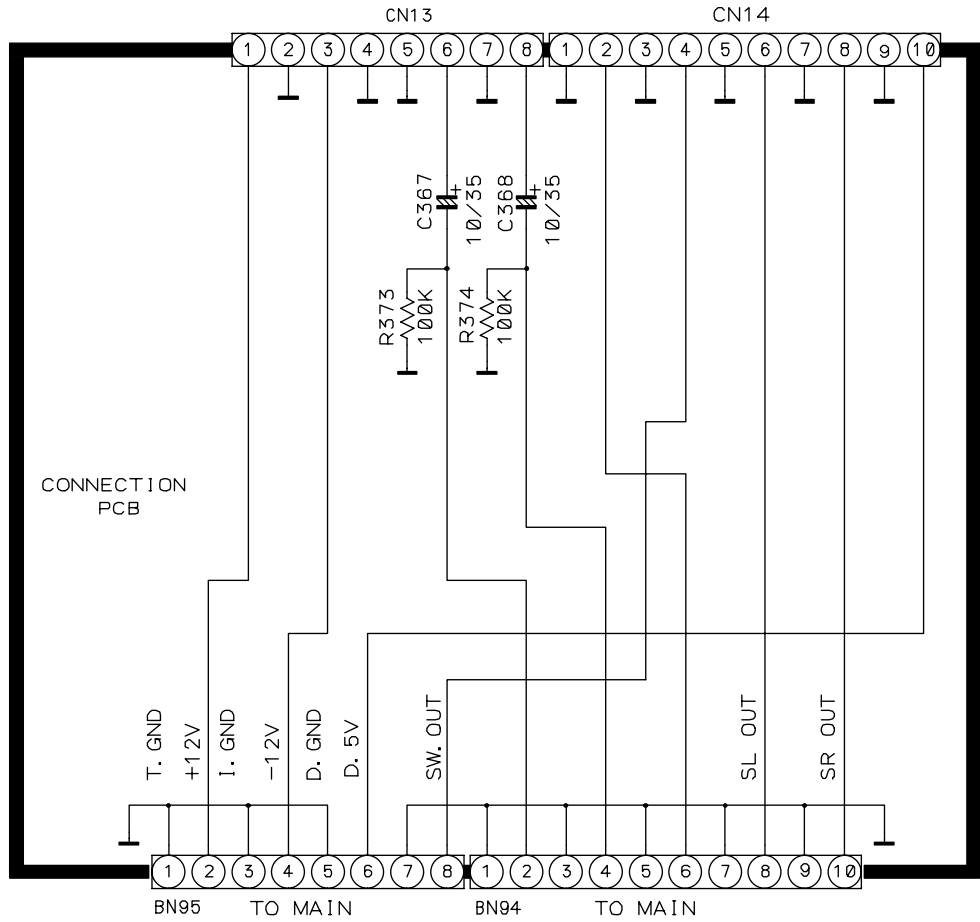
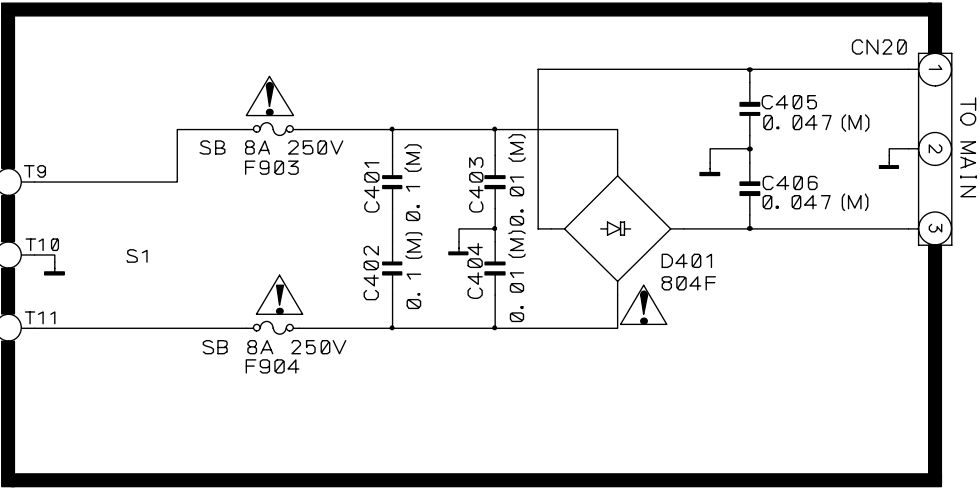


POWER-2 PCB



TRANS AC IN
(PRIMARY)
EUR, HK, CHI : 230V/50Hz
KOR : 220V/60Hz
USA : 120V/60Hz
JPN : 100V/50.60Hz
TAIWAN : 110V/60Hz

POWER-1 PCB



CONNECTION PCB